

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 63-278808

(43)Date of publication of application : 16.11.1988

(51)Int.Cl. B29C 33/40
 // B29C 43/36
 B29C 45/26
 B29C 51/36

(21)Application number : 62-112437

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(22)Date of filing : 11.05.1987

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(54) RESIN MOLD

(57)Abstract:

PURPOSE: To improve remarkably the durability of a mold to have less abrasive deterioration and high hardness by constituting the surface resin layer of the mold of the resin in which the whisker with high mechanical strength is dispersed and composited.

CONSTITUTION: Whisker is composed of acicular crystals having $0.1W1\mu m$ in diameter and $50W200$ of aspect ratio, and the whisker such as SiC or Si₃N₄, etc. is preferable. The surface of a base mold 2 and the inner surface of a core box are coated with the mold releaser such as wax. The whisker of a prescribed concentration is mixed with the thermosetting resin such as urethane resin, etc., and is dispersed uniformly by agitation, and then the surface of the base mold 2 is coated or sprayed with said mixture in a prescribed thickness, whereby the resin layer 3 reinforcing the surface of a resin mold, is molded. Next, said layer 3 is coated or sprayed with the mixture of the thermosetting resin such as epoxy resin or urethane resin, etc., metallic powder and glass fiber chop, thereby laminate-molding an intermediate paste layer 4. Then, the packing material 5 made by mixing glass fiber chop, fine powder of Al₂O₃, SiC, etc. and thermosetting resin with silica sand, is filled in said paste layer, and after it has been fully hardened by pushing and cured under heating, it is removed from the core box. Thus, the resin mold is obtained.

